

x9

PATENT CLAIMS

1. Device for thermal waste water purification with a container through which the waste water flows,
- 5 characterised by
- a) at least one flow guide means (1, 2), which alternately in parallel as overflow weir and as underflow
- 10 weir is arranged to form a chamber for a meander-shaped guide of the waste water in the container (R5), and
- b) at least one heating means (3), which is arranged between two flow guide means (1, 2) in the lower part of the chamber of the container (R5) at the beginning of a
- 15 rising flow, and
- c) serves to produce a supported flow in the chamber and to set to a predetermined temperature.
2. Device according to claim 1, characterised in that
- 20 the flow guide means (1, 2) is formed by a wall, more particularly formed by a screen base, around which the waste water is directed.
3. Device according to at least one of the preceding
- 25 claims, characterised in that the heating means (3) has a device through which steam flows, more particularly a tube bank.
4. Device according to at least one of the preceding
- 30 claims characterised in that the heating means (3) has electric heating.
5. Device according to at least one of the preceding claims characterised in that the container is formed
- 35 cylindrical whereby the longitudinal axis is horizontal.

210

6. Device according to at least one of the preceding claims characterised in that the container has on the top side a collecting pipe (22) for discharging gases.

5

7. Device for thermal waste water purification characterised in that at least two devices (R5) are connected in series.

10 8. Method for thermal waste water purification of melamine-containing waste water by using a device with a container through which waste water flows,

characterised in that in the device

15

a) at least one flow guide means (1, 2), which alternately in parallel as overflow weir and as underflow weir is arranged to form a chamber for a meander-shaped guide of the waste water in the container (R5), and

20 b) at least one heating means (3), which is arranged between two flow guide means (1, 2) in the lower part of the chamber of the container (R5) at the beginning of a rising flow, and

c) serves to produce a supported flow in the chamber and
25 to set to a predetermined temperature.

d) that the temperature in the device (R5) is greater than 190°.

9. Method according to claim 8, characterised in that
30 the temperature in the device (R5) preferably lies in the range 220°C to 230°C.

10. Method according to claim 8 or claim 9, characterised in that the pressure in the device (R5) between 30 and 100
35 bar.

3''

11. Method according to one of claims 8 to 10, characterised in that the pressure in the device (R5) preferably lies between 30 and 60 bar.
- 5 12. Method according to one of claims 8 to 11, characterised in that the waste water is preheated at least once before the hydrolyser (R5).
- 10 13. Method according to one of claims 8 to 12, characterised in that at least a preheating of the supply to the hydrolyser takes place through a heat exchanger (E3) which is heated in the counter flow with the output flow of the hydrolyser (R5).
- 15 14. Method according to one of Claims 8 to 13, characterised in that the waste water is guided through the hydrolyser (R5) to a column (C8) whereby the head product of the column (C8) is directed to the gas washer
- 20 (C9).